NEW SET OF CLAIMS

1. Process for the preparation of ampicillin in which 6-aminopenicillanic acid (6-APA) is subjected to an enzymatic acylation reaction with the aid of a phenylglycine derivative, with the total concentration of the 6-APA present in the reaction mixture, plus ampicillin, being greater than 250 mM, the concentration of 6-APA in solution being kept lower than 300 mM and the molar ratio of acylating agent to 6-APA employed, which molar ratio is defined as the total quantity of added phenylglycine derivative divided by the total quantity of added 6-APA, expressed in moles, being less than 2.5

2. Process according to Claim 1, in which the concentration of the 6-APA plus ampicillin present in the reaction mixture is greater than 300 mM.

3. Process according to Claim 1 or 2, in which the concentration of 6-APA in solution is kept lower than 250 mM.

4. Process according to any one of Claims 1-3, in which the molar ratio of the total acylating agent employed to 6-APA is less than 2.0.

5. Process according to any one of Claims 1-4, characterized in that the 6-APA and/or the phenylglycine derivative is metered in partially in the course of the enzymatic acylation reaction.

AMENDED SHEET

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AMENDED CLAIMS

6. Process according to Claim 5, characterized in that the phenylglycine derivative is metered in as a salt of D-phenylglycine amide and an acid.

7. Process according to Claim 6, characterized in that the phenylglycine derivative is metered in the form of a solution of D-phenylglycine amide.1/2H_2SO_4 in water.

8. Process according to any one of Claims 5-7, characterized in that the metering of the phenylglycine derivative is controlled by means of pH measurement.

9. Process according to any one of Claims 1-8, characterized in that the pH of the reaction mixture is lowered as soon as near to maximum conversion is achieved.

10. Process according to any one of Claims 1-9, characterized in that the temperature of the reaction mixture is lowered as soon as near to maximum conversion is achieved.

AMENDED SHEET